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| Date: | Course:  **Science** | Unit: **The Life Cycle of a Plant** |
| **Objective:**   * Identify the parts of a plant – root, stem, leaves flower and the function of each part * Analyze to make generalizations, and reach conclusions about the function of the parts of a plant * Understand that plants have a life cycle that includes sprouting; developing roots, stems, leaves, and flowers; reproducing; and eventually dying * Observe the changes that occur during plant growth and development * Making predictions * Locating information for a specific purpose * Sequence the stages of plant life | | |
| **Language Arts Standards**:  **Standard 1: Language for Information and Understanding Students will listen, speak, read, and write for information and understanding.**   * Identify information that is implied rather than stated * Apply thinking skills, such as define, classify, and infer, to interpret data, facts, and ideas from informational texts   **Standard 2: Language for L:iterary Response and Expression**   * Students will understand and apply the basic principles of logic reasoning   **Standard 3: Language for Critical Analysis and Evaluation**   * Use relevant examples, such as reasons to support ideas, with assistance * Discuss the impact of vocabulary, format, illustrations, and titles in evaluating ideas, information, and experiences.     **Standard 4: Students will read, write, listen, and speak for social interaction**   * Recognize the types of language (e.g., jargon, informal vocabulary, and email conventions) that are appropriate to social communication   **Science Standards:**  **Standard 2** – **Information Systems**   * Understand that computers can be used to store personal information * Use the internet to telecommunicate with a distant location/person with the teacher’s assistance.   **Standard 3 – Mathematical Reasoning**   * Collect, analyze and display data   **Standard 4** – **Scientific Concepts**   * Observe and describe the cycle of plants * Explore and observe the continuity of life through production of seeds by plants.   **Standard 5 – Apply Technology**   * Generate ideas for possible solution, individually and in groups and explain reason for their choices. | | |
| **Materials:**  Containers  Seeds  Water  Soil  Computers  Jing  Digital clip “The Life Cycle of a Plant”  You Tube clip  Movie Maker | | |
| **Procedures:**  **How a Scientist Investigates Plant Cycles**  *Students will use prior knowledge of journal writing to record entries on the growth and development of a seed. Using investigation, students will learn what is needed for a seed to germinate.*  **Day 1 of Lesson – How does a student investigate how a seed becomes a plant?**  **Students will be asked . . .**  *What is a seed?*  *What is inside of a seed?*  *How do seeds travel?*   * Students will be given several different seeds that have been soaked for 24 hours in water. Lima beans, peas and corn should be used. Students should examine seeds and discover the parts of seeds , seed cover, food supply and embryo plant. * Students will develop a KWL chart on plant seeds and plan investigation of what conditions are necessary for a seed to germinate within their group. * Students will get their seeds . (*lima bean, pea and corn*). With a toothpick they will dissect carefully and identify the parts of each. * Students will then put other un-soaked seeds in a zip lock bag to observe germination.   <http://www.teachersdomain.org/resource/tdc02.sci.life.stru.germinator/>  *(In this video segment from* **ZOOM Science** students will  *learn how to get their seeds to germinate. The students will need a plastic bag, a paper towel, water, and some seeds. In a few days, they’ll see their seeds begin to sprout. Experiments by putting their germinating seeds in sunny or shady places. Where do seeds grow faster?*  *Students will communicate their knowledge about scientists and what they do by evaluating and interpreting their experiments.*  **Day 2 of Lesson**  – **How do we learn about the parts and functions of a plant?**  **Students will be asked . . .**  *How do you think plants or flowers get here?*  *How quick did they get here?*  *How long does it take them to grow?*  *What do they need to continue to grow?*   * Students will be in groups and have the task of investigating the function of one part of the plant, root, stem, flower, leaves. Each group will discuss and record the function of plants in their journal. * Afterwards, group projects will be assigned to those using **“** **Jing”.** This will be used to describe and capture the image of a plant that they have illustrated and identify each part of the plant.   **Day 3 of Lesson** – **How can research and technology assist in learning about plants?**   * Students will use the internet in order to access new information about plants. They will take notes then the information collected will be analyzed by groups of students. They will need information in order to use in their group project.   <http://www.youtube.com/watch?v=sZCtzQS1xSI>  *Students will observe the youtube clip on the lifecycle of a plant and review the vocabulary scientific words.*  *Students will then view the digital clip made by Adris Swift on the Life Cycle of a Plant.*  Students will be asked to use **“**M**ovie Maker”** and in their groups come up with their own digital clip.  **Day 4 of Lesson**  – **Reviewing Perceptions**   * Students will use this day to present to the class their investigation and demonstrations from using “**Jing”** and “**Movie Maker.”** * Students will listen to others, keep accurate records, raise questions to others and reflect on their thoughts, actions and have respect for the knowledge of others.   [www.graves.k12.ky.us/**powerpoint**s/elementary/**symlcherry**.**ppt**](http://www.graves.k12.ky.us/powerpoints/elementary/symlcherry.ppt)  *Students can view this power point presentation as a review of their lesson and answer questions. This explains the* **life cycle of a plant** *and relates the importance of the proper amount of sunlight to the growth and development of a* plant*.*  [www.brainpopjr.com/science/**plant**s/**plantlifecycle**/](http://www.brainpopjr.com/science/plants/plantlifecycle/)  In this movie, students will learn about the life cycle of a plant. They'll explore how a seed can germinate and sprout, grow into a seedling, and then turn into to a plant. | | |
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| **Accommodations for Differentiated Instruction:**   * Assign a seed collection as part of a homework project. Show the children an egg carton. Tell them to collect one kind of seed for each chamber. * List these seeds from different plants. Have the children put them in order from the smallest to largest. Consider corn, lettuce, poppies, walnuts, marigolds, carrots, coconuts, acorns, apples, etc. * Find an odd-looking seed and plant it. The seed grows into\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Write an ending to the story. | | |
| **Resources:**  Ardley,N., The Science Book of Things That Grow, Harcourt, NY, 1991, ISBN#0-15-200586-2  Bates,J., Seeds to Plants, Gloucester, NY, 1991.  Jordan,H., How a Seed Grows, Harpur Collins, NY, 1972, ISBN 0-690-40646-0  [www.brainpopjr.com/science/**plant**s/**plantlifecycle**/](http://www.brainpopjr.com/science/plants/plantlifecycle/)  life cycle of a plant  [http://www.sccs.swathmore.edo/`tkorn/wildflowers/](http://www.sccs.swathmore.edo/%60tkorn/wildflowers/)  *Shows many wildflower pictures and gives interesting facts about flowers*  <http://www2.bgfl.org/bgfl2/custom/resources_ftp/client_ftp/ks2/science/plants_pt2/> | | |
| **Assessments:**   * Teacher Observation * Rubric * Group Assessment -- Putting together a digital *Story on the Life Cycle of a Plant* * Group Assessment -- Jing capture the image of a plant and identify each part of the plant.   **Plant Connection:** | | |
| * Sunflowers need so much sunlight they turn their heads during the day to face the sun. Imagine that you are a sunflower. Someone has built a big building blocking out your sunlight. What are you going to do next? What will you do to reach sunlight? How do you feel? * Go on a walking field trip to collect seeds and grasses from an empty field. Return to school and create a class display Write a poem (illustrate and make into a class book) * People and animals eat the fruits of some plants and the seeds of some, and the leaves of others. Students will write the different parts of plants that people can eat. Then let the they will fill in as many foods that they can think of. Imagine a world without plants. What would we eat? Write a story. * Students will write about the problems that plants create. *(allergies)* They will write a story about one way plants can help or hurt us. | | |

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| |  |  | | --- | --- | | |  | | --- | | **Digital Storytelling : The Life Cycle of a Plant**  Teacher Name: **Mrs. Swift** Student Name:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **CATEGORY** | **4** | **3** | **2** | **1** | | **Economy** | The story is told with exactly the right amount of detail throughout. It does not seem too short nor does it seem too long. | The story composition is typically good, though it seems to drag somewhat OR need slightly more detail in one or two sections. | The story seems to need more editing. It is noticeably too long or too short in more than one section. | The story needs extensive editing. It is too long or too short to be interesting. | | **Images** | Images create a distinct atmosphere or tone that matches different parts of the story. The images may communicate symbolism and/or metaphors. | Images create an atmosphere or tone that matches some parts of the story. The images may communicate symbolism and/or metaphors. | An attempt was made to use images to create an atmosphere/tone but it needed more work. Image choice is logical. | Little or no attempt to use images to create an appropriate atmosphere/tone. | | **Voice - Consistency** | Voice quality is clear and consistently audible throughout the presentation. | Voice quality is clear and consistently audible throughout the majority (85-95%) of the presentation. | Voice quality is clear and consistently audible through some (70-84%)of the presentation. | Voice quality needs more attention. | | **Point of View - Purpose** | Establishes a purpose early on and maintains a clear focus throughout. | Establishes a purpose early on and maintains focus for most of the presentation. | There are a few lapses in focus, but the purpose is fairly clear. | It is difficult to figure out the purpose of the presentation. |  |  | | --- | |  | |



